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# HUMAN HEALTH RISK ASSESSMENT REPORT

**PHILADELPHIA ENERGY SOLUTIONS Refining & Marketing, LLC  
PHILADELPHIA REFINERY  
PHILADELPHIA, PENNSYLVANIA  
and  
SUNOCO PARTNERS Marketing & Terminals, LP  
BELMONT TERMINAL  
PHILADELPHIA, PENNSYLVANIA  
and  
MARCUS HOOK INDUSTRIAL COMPLEX  
MARCUS HOOK, PENNSYLVANIA**



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**February 24, 2015  
2574601**

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## **ACRONYMNS**

AOC	Area of Concern
AT	Non-carcinogenic Averaging Time
bgs	Below Ground Surface
CSM	Conceptual Site Model
EF	Exposure Frequency
HHRA	Human Health Risk Assessment
IR	Intake Rate
MHIC	Marcus Hook Industrial Complex
MSC	Medium-Specific Concentration
PADEP	Pennsylvania Department of Environmental Protection
PES	Philadelphia Energy Solutions
PRG	Preliminary Remediation Goal
RCRA	Resource Conservation and Recovery Act
RfD	Reference Dose
RME	Reasonable Maximum Exposure
SEGH	Society for Environmental Geochemistry and Health
SHS	Statewide Health Standard
SSS	Site-Specific Standard
TRW	Technical Review Workgroup for Lead
USEPA	United States Environmental Protection Agency

## **1.0 EXECUTIVE SUMMARY**

On behalf of the Philadelphia Refinery Operations and Marcus Hook Refinery Operations, series of Evergreen Resources Group, LLC (Evergreen), Langan Engineering and Environmental Services, Inc. (Langan) has prepared this Human Health Risk Assessment (HHRA) report for the Philadelphia Energy Solutions Refining & Marketing, LLC Philadelphia Refinery (PES Refinery), the Sunoco Partners Marketing & Terminals, LP Belmont Terminal (Belmont Terminal) and the Sunoco Partners Marketing & Terminals, LP Marcus Hook Industrial Complex (MHIC).

The objectives of this study are to: 1) evaluate potential human health risks posed by residual concentrations of lead in soil under a non-residential-use scenario for the PES Refinery, Belmont Terminal and the MHIC, and 2) calculate a site-specific risk-based standard that is protective of this scenario. Although a variety of human receptor populations are potentially exposed to soil at each facility under site-specific exposure conditions, the United States Environmental Protection Agency (USEPA) default assumptions for assessing non-residential adult risks from lead exposure are adopted to provide a conservative assessment and develop a site-specific soil screening level applicable to both sites.

The rationale for application of the USEPA default non-residential exposure scenario is to support the future use of each property for non-residential purposes and for attaining Act 2 closure under the Non-Residential Site Specific Standard (SSS) for lead. This HHRA was performed in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. In addition, technical guidance related to risk assessment from the USEPA was applied, as appropriate.

The technical approach for the HHRA consisted of the following basic steps: identification of chemicals of potential concern, exposure assessment, toxicity assessment, risk characterization, and uncertainty analysis. The exposure assessment, toxicity assessment, and risk characterization sections of the HHRA evaluated potential risk from direct and/or indirect exposure to soil. The primary assumption in the USEPA's Adult Lead Model (ALM) is that the most sensitive receptor in the workplace is the developing fetus of a female worker.

Based on the results of this HHRA, Langan has concluded that no unacceptable risks are posed to generic non-residential populations potentially exposed to soil concentrations equivalent to 2,240 milligrams per kilogram (mg/kg). Evaluation of the generic exposure scenario is protective of all receptors identified at each site.

## **2.0 INTRODUCTION**

On behalf of Philadelphia Refinery Operations and Marcus Hook Refinery Operations, series of Evergreen Resources Group, LLC (Evergreen), Langan Engineering and Environmental Services, Inc. (Langan) has prepared this Human Health Risk Assessment (HHRA) report for the Philadelphia Energy Solutions Refining & Marketing, LLC (PES) Philadelphia Refinery, the Sunoco Partners Marketing & Terminals, LP Belmont Terminal (Belmont Terminal) and the Sunoco Partners Marketing & Terminals, LP Marcus Hook Industrial Complex (MHIC).

The objectives of this study are to: 1) evaluate potential human health risks posed by residual concentrations of lead in soil under a non-residential-use scenario for the PES Refinery, Belmont Terminal and the MHIC, and 2) calculate a site-specific risk-based standard that is protective of this scenario.

The rationale for this exposure scenario is to support the continued use of the PES Philadelphia Refinery as a refining complex and the Belmont Terminal as an active fueling terminal and the industrial redevelopment of MHIC under the Act 2 Site-Specific Standard (SSS).

This HHRA was performed in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. In addition, technical guidance related to risk assessment from the United States Environmental Protection Agency (USEPA) was also used, where applicable.

In accordance with Act 2, Langan, on behalf of Evergreen, has prepared the required public and municipal notices as part of this report submittal. Appendix A includes copies of each facility notice of intent to remediate (NIR), as well as the Act 2 report notices and their proof of receipt/publication for this report.

### **2.1 PES Philadelphia Refinery Current Site Conditions**

The PES Philadelphia Refinery is located on approximately 1,295 acres in southwest Philadelphia (Figure 1). The PES Philadelphia Refinery is a Resource Conservation and Recovery Act (RCRA)-permitted facility that is actively managed. The refinery is zoned for heavy industrial use and is expected to remain so in perpetuity. The refining complex produces a wide range of fuels for markets in the United States. Among PES' various products are gasoline, low-sulfur diesel, jet fuel, kerosene, butane, propane,

home heating oil and the petrochemical cumene. PES currently processes approximately 330,000 barrels of crude oil per day.

## **2.2 Belmont Terminal Current Site Conditions**

The Belmont Terminal is located on approximately 100 acres in southwest Philadelphia (Figure 2). The Belmont Terminal is comprised of primarily gasoline and diesel loading racks. The area is utilized for blending gasoline and additives, as well as wholesale distribution through the terminal. There are numerous underground process lines at the terminal. The Belmont Terminal is owned by Sunoco Partners Marketing and Terminals, LP.

## **2.3 MHIC Current Site Conditions**

The MHIC is a RCRA-permitted facility that is actively managed. The MHIC is zoned for heavy industrial use and is expected to remain so in perpetuity. The MHIC is primarily located in Marcus Hook, Delaware County, Pennsylvania (Figure 3). A section of the southwest portion of the facility is located in New Castle County, Delaware. As of April 1, 2014, the MHIC is owned by Sunoco Partners Marketing and Terminals L.P. (SXL). On December 1, 2011, Sunoco Inc. (R&M) announced the indefinite idling of the main processing units at the former refinery due to deteriorating refining market conditions. Since the idling of processing units, select demolition and deconstruction has occurred. In 2013, SXL began redevelopment of the former Lube Service Center for the processing, storage, and distribution of ethane and propane. The future use of the remainder of the facility is uncertain; however, the future use will be non-residential.

## **2.4 Act 2 Context**

Evergreen and Langan will prepare a Final Act 2 Closure Report for Areas of Interest (AOI) at each site in accordance with the existing Work Plan for Sitewide Approach Under the One Cleanup Program (Sunoco 2011). The purpose of the Final Act 2 Reports is to document the framework for attaining Act 2 closure and to receive a release of liability from the PADEP for lead detected in soil. Specifically, Evergreen will demonstrate attainment of the Non-Residential Statewide Health Standards for site chemicals of concern (COCs) and Site-Specific Standard for soil in the Final Reports. For lead, soil concentration data will be compared to the SSS derived in this HHRA to evaluate the attainability of Act 2 Standards.



### 3.0 DATA ANALYSIS

Maximum concentrations of lead detected in soil samples collected at the PES Philadelphia Refinery, the Belmont Terminal and the MHIC were compared to Pennsylvania's Act 2 Non-Residential Direct Contact Medium-Specific Concentration (MSC) for soil of 1,000 milligrams per kilogram (mg/kg) to establish lead as a constituent of potential concern at each facility. The SSS for lead is independent of the cumulative risks and hazards that will be evaluated in subsequent risk assessment reports submitted for the PES Refinery, the Belmont Terminal and the MHIC. Therefore, this HHRA does not consider chemical data for other site-related COCs.

### 4.0 APPLICABILITY OF THE ADULT LEAD MODEL

The PADEP published a Non-Residential MSC for lead calculated on the basis of soil ingestion as presented in 25 Pa. Code § 250.306(e), Appendix A, Table 7. The Non-Residential MSC was derived using the Society for Environmental Geochemistry and Health (SEGH) model, which was developed by the SEGH "Lead in Soil" Task Force (Wixson, 1991). In the SEGH model, a blood lead concentration (PbB) is equated to a baseline level plus an increment resulting from exposure to lead in soil or dust. The slope of the blood lead/environmental lead relationship used in calculating the increase in PbB over the baseline value, and, hence the soil screening level, can vary depending on a multitude of factors. The SEGH model permits adjustment of the target blood lead concentration (T), geometric mean background blood lead concentration (B), and geometric standard deviation (GSD) of blood lead distribution in consideration of site-specific conditions, but precludes adjustments on the basis of exposure and lead bioavailability.

The PADEP has endorsed the use of alternative uptake biokinetic models for the evaluation of lead toxicity (PADEP, 2013). Given that the Integrated Exposure Uptake Biokinetic (IEUBK) Model does not apply to adult exposure in nonresidential scenarios, the PADEP maintains:

"For adult exposure in either the residential or nonresidential scenario... other models, such as the Bower [sic] model (Bowers *et al.*, 1994), or the physiologically-based pharmacokinetic model (O'Flaherty, 1995, 1997) developed to determine the effects of lead on adults may be used to determine site-specific cleanup numbers."

In response to the need for a scientifically defensible approach for assessing soil-borne human health lead risks at non-residential hazardous waste sites, the USEPA adapted the Bowers *et al.* model to develop the Adult Lead Model (ALM) using the same basic algorithms. The ALM is a widely-accepted approach to risk characterization for commercial and industrial adult worker exposure scenarios. In 2001, the USEPA conducted a review of six biokinetic adult lead models for assessing human health risk associated with non-residential exposure. The study concluded

that no single model, including the O'Flaherty model, represented a significant improvement to the ALM. Consequently, USEPA recommended continued use of the ALM (EPA, 2001).

## **5.0 CONCEPTUAL SITE MODEL**

Current and known or potential future land use plays a significant role in the development of the Conceptual Site Model (CSM). The land use must also be assessed before receptor populations can be identified.

For this analysis, non-residential use was assumed to be the only probable future use based on the industrial setting and current zoning in the vicinity of each facility. Based on an evaluation of the current and likely future use of each facility, a list of receptor populations was identified for evaluation in human health risk assessments (Langan, 2014a and 2014b).

In general, risk assessments should be based upon realistic exposure scenarios. Site-specific information on exposure pathways, receptors and exposure factors, including actual data, should be used to the maximum extent possible (PADEP, 2013). However, not all exposure parameters need to be site-specific. Overall, it is important to consider whether using default exposure scenario assumptions will result in the calculation of a SSS that reflects the receptors and exposure pathways that are both currently occurring and that could reasonably occur in the future.

Given that the default exposure assumptions developed by USEPA for the ALM are not entirely inconsistent with the receptors and exposure pathways identified at the PES Philadelphia Refinery, the Belmont Terminal and the MHIC, application of site-specific alternatives to the default assumptions was not necessary to develop a SSS for lead. The ALM uses biokinetic slope factor to represent lead biokinetics and a relatively simplistic exposure model in which all exposure pathways, other than soil ingestion, are represented by a background blood lead concentration. For the purposes of the CSM, potentially complete exposure pathways associated with lead in soil include incidental ingestion of soil, dermal contact with soil, and inhalation of indoor and outdoor dust.

Each site was identified as a single unit of exposure that may be accessed by future non-residential receptors. A summary of the receptors, exposure media, and potentially complete exposure pathways assessed in this HHRA are provided below:

Receptor	Exposure Media	Potentially Complete Soil Exposure Pathways
Generic Non-Residential Worker	Surface soil 0-2 feet below ground surface (bgs)	Incidental ingestion, dermal contact, and inhalation of indoor and outdoor dust

## 6.0 EXPOSURE ASSESSMENT

This section presents the framework used by Langan to derive the potential exposures from lead for the default non-residential worker evaluated in this HHRA. Specifically, this framework was used to assess an exposure pathway, which is the course a chemical takes from its source to the exposed receptor. In order for an exposure pathway to be complete, it must contain a source, a transport medium (e.g., soil, air), a point of contact (receptor), and an exposure route (e.g., ingestion, dermal, or inhalation). If any of these elements is missing, an exposure pathway is deemed incomplete and can be excluded from the quantitative evaluation of risk (USEPA 1989).

### 6.1 Intake Calculations

Chemical exposure/intake is expressed as the amount of the agent at the exchange boundaries of an organism (e.g., skin, lungs, and intestinal tract) that is available for systemic absorption. The term "soil" refers to that portion of the soil to which adults are most likely to be exposed. Exposure to soil-derived dust occurs both in outdoor and indoor environments, the latter occurring where soil-derived dust has been transported indoors. Other types of dust, in addition to soil-derived dust, can contribute to adult lead exposure.

The general equation for exposure to lead from soil (direct and through indoor soil-derived dust) as defined by USEPA (2003):

$$Intake \left( \frac{\mu g}{day} \right) = \frac{PbS \times IR \times EF}{AT}$$

where:

Intake = Daily average intake (ingestion) of lead from soil taken over the averaging time in micrograms per day (μg/day)

PbS = Soil lead concentration in micrograms per gram ( $\mu\text{g/g}$ ) (appropriate average concentration for individual)

IR = Intake rate of soil, including outdoor soil and indoor soil-derived dust in grams per day (g/day)

EF = Exposure frequency for contact with assessed soils and/or dust derived in part from these soils in days per year (days/year)

AT = Averaging time in days (the total period during which soil contact may occur)

Lead uptake is the daily average uptake of lead from the gastrointestinal tract into systemic circulation ( $\mu\text{g/day}$ ) and is derived by multiplying intake by the dimensionless absolute gastrointestinal absorption fraction (AF) for ingested lead in soil and lead in dust derived from soil.

## **6.2 Exposure Frequency**

The exposure frequency (EF) describes the number of times per year an event is likely to occur. Variables such as weather, vacations, and institutional controls are considered when determining reasonable and realistic exposure frequencies. The USEPA's Technical Workgroup for Lead (TRW) recommends a default value of 219 days/year. This is the same as the central tendency occupational exposure frequency recommended by USEPA, which is based on data from the Bureau of Labor Statistics. This estimate corresponds to the average time spent at work by both full-time and part-time workers. The default central tendency EF represents reasonable maximum exposure (RME) at the PES Philadelphia Refinery, the Belmont Terminal and MHIC.

## **6.3 Averaging Time**

The AT parameter is the period over which exposure is averaged. For non-carcinogenic effects, AT is used in calculating an average daily exposure, and is 365 days/year for continuing, long-term exposures.

## **6.4 Daily Soil Ingestion Rate**

The ingestion rate (IR) is the soil ingestion rate for oral exposures to soils. The USEPA's TRW recommends a default value of 0.05 g/day as a plausible point estimate of the central tendency for daily soil intake from all occupational sources, including soil in indoor dust resulting from non-contact intensive activities. In adopting the single IR parameter to describe all sources of ingested soil, the methodology is consistent with

the recommendations of the Superfund program and the default PADEP adult non-residential soil ingestion rate.

## 7.0 TOXICITY ASSESSMENT

This section presents the toxicity assessment for the PES Refinery, the Belmont Terminal and MHIC site-wide lead HHRA. The toxicity assessment provides a summary of the critical toxicity values (CTVs) that have been developed by USEPA to evaluate potential adverse health effects associated with chemical exposure.

The non-carcinogenic CTV is known as the reference dose (RfD). RfDs used to evaluate non-cancer effects are based on the premise that non-carcinogenic (i.e., toxic) effects exhibit a threshold. As long as the chronic daily intake of a chemical is less than the reference dose, exposure is unlikely to result in any adverse non-carcinogenic health effect. Reference doses are developed using human and animal studies, and incorporate safety factors to ensure health protection in the most sensitive population.

Inorganic lead does not currently have an RfD. Instead the potential health hazard from exposure to environmental lead can be estimated based on predicted blood lead levels in sensitive populations. The epidemiological investigations of the health effects of lead were discussed in the *Air Quality Criteria for Lead Volumes I-IV* (USEPA, 1986a) and the 1990 Addendum (USEPA, 1990). Based on an assessment of these studies, the USEPA concluded that fetal lead exposure could have undesirable effects on infant mental development, length of gestation, and possibly other aspects of fetal development, specifically neurobehavioral deficits. In particular, the USEPA determined that, "All of these studies taken together suggest that neurobehavioral deficits, including declines in Bayley Mental Development Index scores and other assessments of neurobehavioral function, are associated with prenatal blood lead exposure levels on the order of 10 to 15 micrograms per deciliter ( $\mu\text{g}/\text{dl}$ )" (USEPA, 1986b).

The USEPA's TRW has developed an interim guidance for assessing lead risks and establishing action levels for lead that are protective of both adults and the fetus of a pregnant adult. Action levels and target blood lead levels are estimated using USEPA's ALM (USEPA, 2003). The primary assumption in the ALM methodology is that the most sensitive receptor in the workplace is the developing fetus of a worker exposed in the workplace, since the USEPA identified the developing fetus as part of the sensitive U.S. population. For the PES Refinery, the Belmont Terminal and MHIC, this would be defined as a commercial/industrial worker that becomes pregnant at some point during the work year. The lead model does not assume that a pregnant worker is present at the site for the entire pregnancy, rather, that the worker has

worked at the site long enough to result in an elevated blood lead level to which the fetus could be subsequently exposed.

The ALM methodology is designed to estimate an average soil lead concentration that is not expected to result in a greater than 5% probability that the fetus of a female worker of child-bearing age has a blood lead level exceeding the level of concern of 10 µg/dL of blood (USEPA, 2003). This represents a conservative approach, as the PADEP applies a target blood lead level of 20 µg/dL as the default value in deriving the MSC for lead (PADEP, 1997).

## 8.0 RISK CHARACTERIZATION

This section presents the risk characterization for lead in soil at the PES Philadelphia Refinery, the Belmont Terminal and MHIC. The objective of the risk characterization is to calculate a generic SSS protective of all receptors by combining the results of the exposure and toxicity assessments.

The approach used to calculate a SSS for lead is presented below. In order to ensure that the SSS for both sites is adequately protective, the lead soil standard presented in this risk assessment was calculated using the default values and assumptions recommended by USEPA. The ALM methodology relates site lead concentrations to blood lead concentration in the mother and developing fetus based on the following additional assumptions:

- Fetal blood lead levels are proportional to maternal blood lead levels;
- Maternal blood lead levels can be predicted based on starting blood lead concentrations and an expected site-related increase;
- The site-related increase in maternal blood lead concentrations can be estimated using a linear biokinetic slope factor (BKSF) which is multiplied by the estimated lead uptake;
- Lead uptake can be estimated based on site concentrations of lead and assumptions regarding adult ingestion rates and the estimated AF of ingested lead; and
- A log-normal model can be used to estimate the distribution of blood lead concentrations in a population of individuals who contact similar environmental lead levels.

The basis for the calculation of the blood lead concentration for women of child-bearing age is given by:

$$PbB_{adult,central,goal} = PbB_{adult,0} + \frac{PbS * BKSF * IR * AF * EF}{AT}$$

where:

$PbB_{adult, central, goal}$  = Goal for central estimate of blood lead concentration

$PbB_{adult,0}$  = Typical blood lead concentration

$PbS$  = Soil lead concentration (appropriate average concentration for individual)

BKSF = Biokinetic slope factor

IR = Intake rate of soil

AF = Absolute gastrointestinal absorption fraction

EF = Exposure frequency

AT = Averaging time

Given that the effects of lead are well understood, and the mean  $PbB$  is recognized as an acceptable predictor of the potential health effects associated with lead exposure, the approach outlined in the ALM derives a soil lead concentration that is considered protective of all employees. The foundation for the SSS calculation is the relationship between the mean soil lead concentration and the blood lead concentration in the developing fetus expressed by the following equation:

$$PRG = \frac{(PbB_{adult,central,goal} - PbB_{adult,0}) * AT}{BKSF * IR * AF * EF}$$

where:

PRG = Preliminary Remediation Goal, implemented as the SSS

Consistent with the USEPA's 2009 *Update of the Adult Lead Methodology's Default Baseline Blood Lead Concentration and Geometric Standard Deviation Parameters* (USEPA 2009), the most current background blood lead level and geometric standard deviation parameter made available from the 1999-2004 National Health and Nutrition Examination Survey (Center for Disease Control, 2005) is utilized in the ALM. An action level of 2,240  $\mu\text{g/g}$  (ppm) lead in soil for the generic non-residential site worker was estimated using Equations 1 and 2 and parameter values as shown below:

Exposure Variable	Description of Exposure Variable	Units	Value	Rationale/Source
$PbB_{fetal, 0.95}$	95 <sup>th</sup> percentile fetal blood lead concentration	$\mu\text{g/dL}$	10	USEPA 2003
$R_{fetal/maternal}$	Fetal/maternal blood lead concentration	—	0.9	USEPA 2003

Exposure Variable	Description of Exposure Variable	Units	Value	Rationale/Source
BKSF	Biokinetic slope factor	µg/dL per µg/day	0.4	USEPA 2003
GSD <sub>i</sub>	Geometric standard deviation blood lead concentration	--	1.8	Updated from analysis of NHANES
PbB <sub>adult,0</sub>	Adult baseline blood lead concentration	µg/dL	1.0	Updated from analysis of NHANES
IR	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.05	PADEP 2013, EPA 2003
AF	Oral absorption of lead in soil	–	0.12	Based on absorption factor of soluble lead of 0.2 and soil matrix effect of 0.6 (USEPA 2003)
EF	Exposure frequency	days/yr	219	USEPA 2003
AT	Averaging time	days/yr	365	USEPA 2003

Based on the parameters used, the USEPA model predicts that exposure to lead in soil at a concentration of 2,240 mg/kg ( $2,240 \text{ µg/g} * 1,000 \text{ g/kg} * 1 \text{ mg}/1,000 \text{ µg} = 2,240 \text{ mg/kg}$ ) would result in a typical developing fetus of a site worker exposed at either facility having an estimated risk of approximately 5 percent of exceeding the 10 µg/dL blood lead level of concern. This is the target fetal blood lead distribution identified in USEPA guidance as posing an acceptable level of risk (USEPA, 2003).

The SSS for lead in soil at the PES Philadelphia Refinery, the Belmont Terminal and MHIC is shown in the following table and attached as Table 1:

Medium	Receptor	SSS	Units	Basis
Soil	Generic Non-residential Receptor	2,240	mg/kg	ALM



## **8.1 Uncertainty**

Although the methods used to calculate the SSS for lead in soil at the PES Philadelphia Refinery, the Belmont Terminal and the MHIC comply with USEPA and PADEP standards, there are uncertainties associated with the procedures discussed above. This section discusses the following sources of uncertainties in the HHRA for the lead SSS:

- Data collection and evaluation;
- Exposure assessment;
- Bioavailability; and
- Risk characterization.

In the HHRA, it is assumed that samples collected will be representative of the area to which human populations will be exposed. However, the samples may not be completely representative due to biases in sampling and to random variability of samples. Soils are not homogeneously distributed in the environment; therefore, characterization and delineation of soil to the SSS lead standard may result in an over- or under-estimation of actual concentrations and, thus, site risks.

The exposure assessment relied on a number of assumptions regarding the RME scenario used to provide an upper bound estimate of risk. Use of the USEPA's default exposure assumptions for exposure frequency and ingestion rate is highly likely to over-estimate potential risks. Uncertainty is also compounded with regard to assumptions about scenario settings and availability of contaminated soil for contact. For example the derivation of a SSS does not take into account that walkways, parking areas, and other structures preclude contact with contaminated soil, thus potentially resulting in an incomplete exposure pathway.

The default AF parameter is based, in part, on the assumption that the relative bioavailability of lead in soil compared to soluble lead is 0.6. The default AF represents a weight of evidence determination based on experimental estimates of the bioavailability of ingested lead in adult humans with consideration of three major sources of variability that are likely to be present in populations, but are not always represented in experimental studies. These include: variability in food intake, lead intake, and the lead form and particle size. The TRW considers 0.6 to be a plausible default point estimate for the relative bioavailability of lead in soil when site-specific data are not available.

Because there are uncertainties in each step in the derivation of a SSS, these uncertainties are often magnified in the final risk characterization. Because of the

conservative approaches used in each step, the overall SSS may be significantly lower, and thus overly conservative, than actual conditions at each facility would support.

## 9.0 SUMMARY AND CONCLUSIONS

Based on the results of this HHRA, Langan has concluded that a SSS for lead in soil of 2,240 mg/kg is protective of all receptor populations at the PES Philadelphia Refinery, the Belmont Terminal and MHIC. This derived value will be utilized for future reports submitted by Evergreen under the One Cleanup Program and/or the PADEP Act 2 program for the above referenced facilities.

## 10.0 REFERENCES

- USEPA. 1986a. *Air Quality Criteria for Lead*. Office of Health and Environmental Assessment, EPA-600/8-83/028aF-df
- USEPA. 1986b. *Lead Effects on Cardiovascular Function, Early Development, and Stature: an Addendum to the USEPA Air Quality Criteria for Lead (1986)*. Office of Health and Environmental Assessment, EPA-600/8-83/028aF
- USEPA. 1989. *Risk Assessment Guidance for Superfund. Volume I, Human Health Evaluation Manual (Part A)*. Interim Final. EPA/540/1-89/002. Office of Emergency and Remedial Response. Washington, DC.
- USEPA. 1990. *Supplement to the 1986 EPA Air Quality Criteria Document for Lead – Volume 1 Addendum*. Office of Research and Development, Office of Health and Environmental Assessment, Washington, DC. EPA-600/8-89/049A.
- Wixson, B.G., (1991). *The Society of Environmental Geochemistry and Health (SEGH) Task Force Approach to the Assessment of Lead in Soil*. Trace Substances in Environmental Health. 11-20.
- PADEP. 1997. *Appendix A, Table 7, Default Values for Calculating Medium-Specific Concentrations for Lead*. Pennsylvania's Land Recycling Program Technical Guidance Manual. §250.203. August 15, 1997.
- USEPA. 2001. *Evaluation of Models for Assessing Human Health Risks Associated with Lead Exposures at Non-Residential Areas of Superfund and Other Hazardous Waste Sites*. EPA-OSWER #9285.7-46. Office of Solid Waste and Emergency Response. Washington, DC. August 2001.

- USEPA. 2003. *Recommendations of the Technical Review Workgroup for Lead for an Approach to Assessing Risks Associated with Adult Exposures to Lead in Soil*. EPA-540-R-03-001. Technical Review Workgroup for Lead. Washington, DC. January 2003.
- CDC. 2005. National Center for Health Statistics. *National Health and Nutrition Examination Survey Data*. Hyattsville, MD.
- Sunoco. 2011. *Work Plan for Sitewide Approach Under the One Cleanup Program*. Sunoco, Inc. (R&M). Revision Date: November 30, 2011.
- PADEP. 2013. *Land Recycling Program Technical Guidance Manual, General Guidance*. December, 2013.
- Langan. 2014a . *Receptor Evaluation for the PES Philadelphia Refinery*.
- Langan. 2014b. *Receptor Evaluation for the Marcus Hook Industrial Complex*.

## **TABLES**

**Table 1**  
**Calculation of a Site-Specific Standard for Lead**  
**Philadelphia Refinery, Belmont Terminal and Marcus Hook Industrial Complex**  
**U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee**  
**Version date 6/21/09**

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 1999-2004
$PbB_{fetal, 0.95}$	95 <sup>th</sup> percentile PbB in fetus	ug/dL	10
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
$GSD_i$	Geometric standard deviation PbB	--	1.8
$PbB_0$	Baseline PbB	ug/dL	1.0
$IR_s$	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.050
$AF_{s, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{s, D}$	Exposure frequency (same for soil and dust)	days/yr	219
$AT_{s, D}$	Averaging time (same for soil and dust)	days/yr	365
<b>Site Specific Standard (SSS) for Lead</b>		<b>ppm</b>	<b>2,240</b>

Notes:

ug/dL = micrograms per deciliter

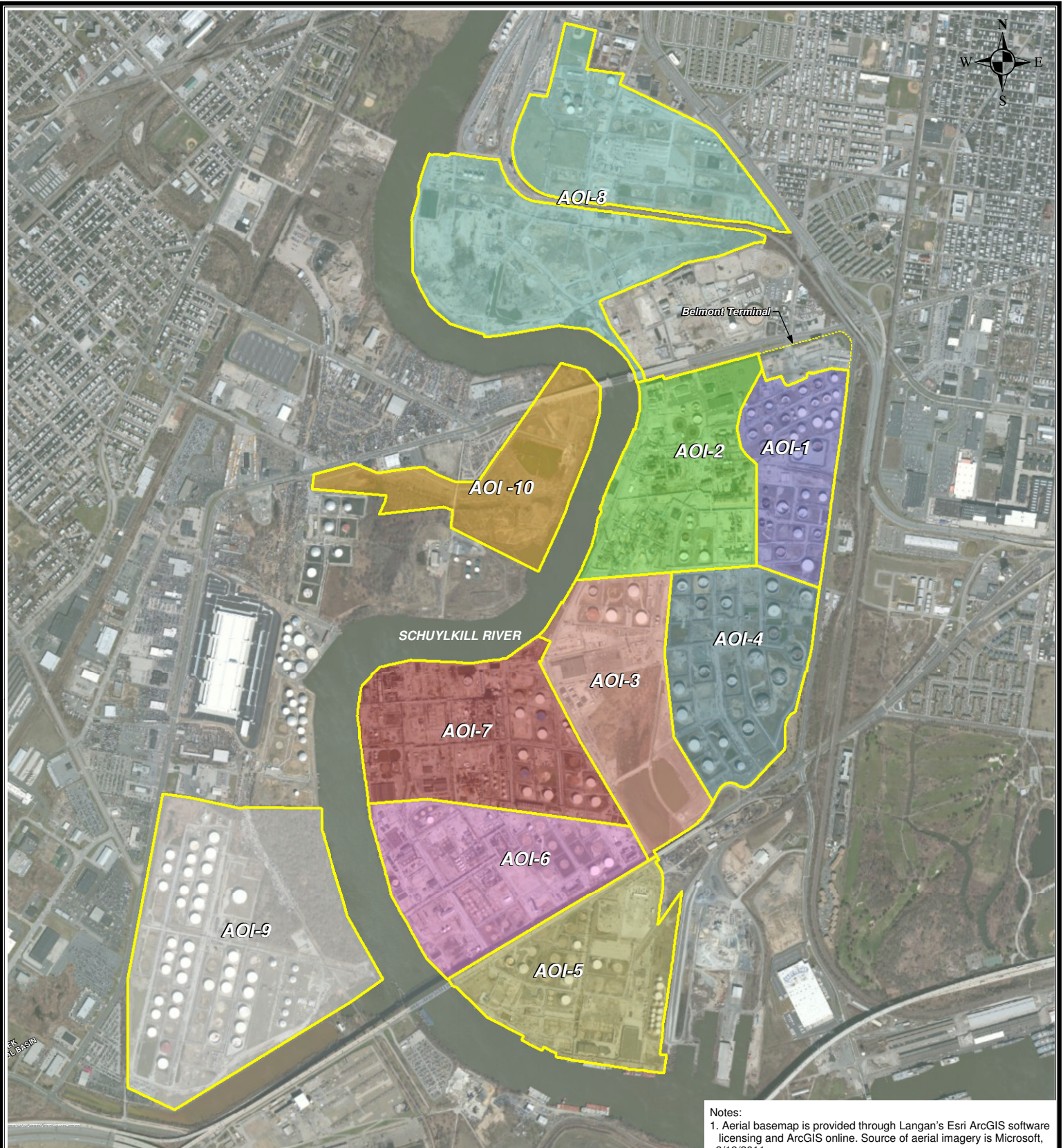
ug/day = micrograms per day

g/day = grams per day

days/yr = days per year

## FIGURES





Notes:  
1. Aerial basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Source of aerial imagery is Microsoft, 3/19/2011.

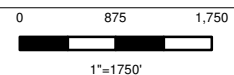
### Legend

- |   |  |
|---|--|
| AOI-1: No.1 Tank Farm/No.2 Tank Farm      | AOI-6: Girard Point Chemical Processing Area   |
| AOI-2: Point Breeze Processing Area       | AOI-7: Girard Point Fuels Processing Area      |
| AOI-3: Impoundment Area                   | AOI-8: Point Breeze Process Area North Yard    |
| AOI-4: No. 4 Tank Farm Area               | AOI-9: Schuylkill River Tank Farm              |
| AOI-5: Girard Point South Tank Field Area | AOI-10: Point Breeze Processing Area West Yard |
|   | Belmont Terminal                               |

Figure 1: Site Location Plan for PES  
Philadelphia Refinery  
Philadelphia, Pennsylvania



**Evergreen Resources  
Management Operations**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803



SCALE: 1" = 1750'  
DATE: January 26, 2015  
DRN: BY: MM  
CKD: BY: KM  
JOB#: 2574601





### Legend

- AOI Boundaries
- Belmont Terminal

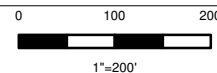
### Notes:

1. Aerial basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Source of aerial imagery is Microsoft, 3/19/2011.

Figure 2: Site Location Plan for  
Belmont Terminal  
Philadelphia, Pennsylvania

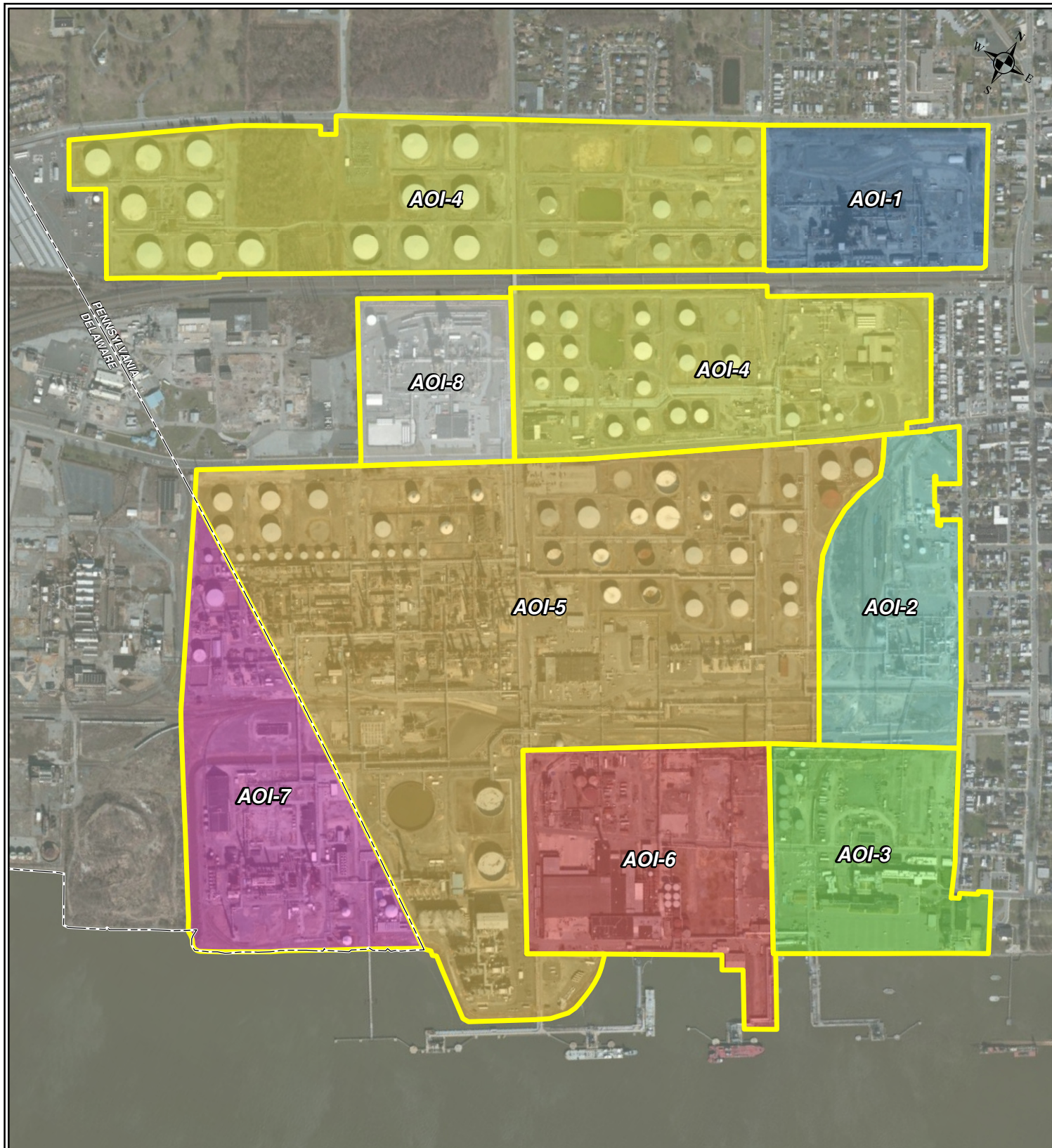


**Evergreen Resources  
Management Operations**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803



SCALE: 1" = 200'  
DATE: January 26, 2015  
DRN: BY: MM  
CKD: BY: KM  
JOB#: 2574601





## Legend

### Areas of Interest

- |  |   |
|--|---|
|  AOI-1 - 10 Plant                  |  AOI-5 - Lower No. 1 Tank Farm/15 & 17 Plants/ Storm Water Tankage |
|  AOI-2 - 12 Plant                  |  AOI-6 - Lube Oil Center   |
|  AOI-3 - Refinery Office Buildings |  AOI-7 - Ethylene Complex & Delaware Portion                       |
|  AOI-4 - Upper No. 1 Tank Farm     |  AOI-8 - Polypropylene Plant                                       |
|  |  Delaware State Line   |

### Notes:

1. Aerial basemap is provided through Langan's Esri ArcGIS software licensing and ArcGIS online. Source of aerial imagery is Microsoft, 3/19/2011.

Figure 3: Site Location Plan for Marcus Hook Industrial Complex  
Marcus Hook, Pennsylvania



Evergreen Resources  
Management Operations  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

0 425 850 Feet

SCALE: 1" = 850'  
DATE: January 26, 2015  
DRN. BY: MH  
CKD. BY: KM  
JOB#: 2574601

## **APPENDIX A**

### **NOTICES OF INTENT TO REMEDIATE AND REPORT NOTIFICATIONS**

## **PHILADELPHIA ENERGY SOLUTIONS (PES) FACILITY**



**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

November 17, 2014

Mr. C. David Brown, Ph. D., PG  
Department of Environmental Protection  
2 East Main Street  
Norristown, PA 19401

**RE: Philadelphia Energy Solutions Refining & Marketing LLC (PES) Philadelphia Refinery Complex  
3144 West Passyunk Avenue, Philadelphia, Philadelphia County, Pennsylvania**

Dear Mr. Brown:

In accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2), enclosed is the revised Notice of Intent to Remediate (NIR) for the Philadelphia Refinery Complex (site). The original NIR for the site was submitted on October 12, 2006. The purpose of this revision is to update owner and remediator information for the facility. This revision also includes a site location map depicting a change to property boundaries, most notably the exclusion of Belmont Terminal, which was covered under a separate NIR submission on October 6, 2014. It should be noted that the Belmont Terminal was not included in the original October 12, 2006 NIR, therefore, its exclusion from the revised NIR is not a change.

On August 14, 2012, Sunoco, Inc. (R&M) (Sunoco) entered into a Consent Order and Agreement with Philadelphia Energy Solutions Refining & Marketing LLC (PES) and the Pennsylvania Department of Environmental Protection (PADEP) for the Philadelphia Refinery Complex. As part of this buyer-seller agreement, Sunoco retained responsibility of remediation activities for environmental conditions existing at the time of the transfer, and PES is responsible for environmental conditions following the purchase agreement. On September 8, 2012, Sunoco conveyed the Philadelphia Refinery to PES. Effective December 30, 2013, "Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC" (Evergreen) assumed Sunoco legacy remediation liabilities with respect to the Philadelphia Refinery Complex. Evergreen will continue to manage the remediation work at the facility under the One Cleanup Program with the PADEP and United States Environmental Protection Agency (USEPA) and in accordance with 2012 Consent Order & Agreement.

Please call me at (302) 477-0192 with any questions or comments.

Best Regards,

James Oppenheim, PE  
Vice President

cc: Evergreen File  
Charles Barksdale, Philadelphia Energy Solutions Refining and Marketing, LLC  
Jennifer Menges, Stantec Consulting Services Inc.



## NOTICE OF INTENT TO REMEDIATE

Act 1995-2 requires four general information items to be included in the NIR: the general location, listing of contaminants, intended use of property, and proposed remediation measures. In addition, indicate the standard(s) to be obtained (if known) and attach a scaled site map (if available).

Property Name Philadelphia Energy Solutions Refining & Marketing LLC (PES) Philadelphia Refinery Complex

Former Name(s) / AKA Sunoco Inc. (R&M) Philadelphia Refinery

Address / Location 3144 Passyunk Avenue

City Philadelphia Zip Code 19145

Municipality(s) City of Philadelphia County(ies) Philadelphia

Latitude 39 ° (deg). 55 ' (min) 13.976 " (sec) Longitude 75 ° (deg). 11 ' (min) 52.429 " (sec)

Horizontal Collection Method Geographic Information Systems

Horizontal Reference Datum NAD 1983 Reference Point Visitor Entrance

☒ Wish to participate in the DEP/EPA MOA. Contact Troy Conrad at [tconrad@state.pa.us](mailto:tconrad@state.pa.us) for details.

EPA ID#, if known PAD049791098

DEP ID#(s), if known Multiple

(i.e., eFACTS site ID#, storage tank facility ID#, water quality permit #, watershed permit, air quality permit #, etc.)

Date Release Occurred (if known) \_\_\_\_\_

Provide a brief description of the site contamination in plain language (e.g. fuel oil spill, historical chemical industrial area contamination), the names of any know primary contaminants to be addressed, and the intended future use of the property.

The site contamination consists of impacts to soil and groundwater associated with historic petrochemical refining operations. The primary constituents of concern in soil and groundwater are lead, 1,2-dichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, cumene, ethylbenzene, methyl tertiary butyl ether, toluene, total xylenes, ethylene dibromide, anthracene, benzo(a)anthracene, benzo(g,h,i)perylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, phenanthrene, and pyrene. The future use of the facility is to remain industrial.

Provide a general description of proposed remediation measures.

Evergreen is submitting this Notice of Intent to Remediate (NIR) in order update an NIR previously submitted on October 6, 2006 which formally entered the property into the PA Act 2 Program. In November 2011, the facility was formally entered into the PA One Cleanup Program with the USEPA and PADEP. The purpose of this NIR revision is to update the facility ownership and remediator information. The facility has been divided into 11 Areas of Interest (AOIs). These areas consist of the Point Breeze Processing Area North Yard (AOI 8) and South Yards (AOI 1 through AOI 4); the Girard Point South Tank Field (AOI 5) and Processing Area (AOI 6 and AOI 7); the Schuylkill River Tank Farm (AOI 9); the West Yard (AOI 10); and the deep aquifer (AOI 11). Each AOI will be characterized in accordance with PA Act 2, and remedial measures will be developed to address the risk of exposure identified during

the characterization activities.



Remediation Standard(s) planned (if known at this time):

<input type="checkbox"/> Unknown at this time	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Background Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health - Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health – Non-Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input checked="" type="checkbox"/> Site Specific Contaminants:	<input checked="" type="checkbox"/> Soil	<input checked="" type="checkbox"/> Groundwater
<input type="checkbox"/> Special Industrial Area* Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater

\*NOTE: Specific standard or Special Industrial Area require a 30-day municipal comment period

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.**Remediator**

Contact Person/Title Jim Oppenheim, PE/Vice President eFACTS Client ID\* 314958  
 Relationship to Site Remediator Client Type\* Limited Liability Company  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management Operations EIN or Federal ID # 46-4184955  
 Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803

**Property Owner**

Contact Person/Title Charles Barksdale Jr./Site Environmental Director eFACTS Client ID\* 298341  
 Relationship to Site Owner Client Type\* Limited Liability Company  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number 215-339-2074 Email Address charles.barksdale@pes-companies.com  
 Company Name Philadelphia Energy Solutions Refining and Marketing, LLC EIN or Federal ID # 61-168974  
 Address (street, city, state, zip) 3144 Passyunk Ave, Philadelphia, PA 19145

**Consultant**

Contact Person/Title Jennifer Menges/Principal Consultant, LRS eFACTS Client ID\* N/A  
 Relationship to Site Consultant Client Type\* N/A  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (610) 840-2540 Email Address Jennifer.Menges@stantec.com  
 Company Name Stantec EIN or Federal ID # N/A  
 Address (street, city, state, zip) 1060 Andrew Drive, Suite 140, West Chester, PA 19380

\*Include eFACTS Client ID (if known) – “Client Types” below:

Association/Organization	Limited Liability company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

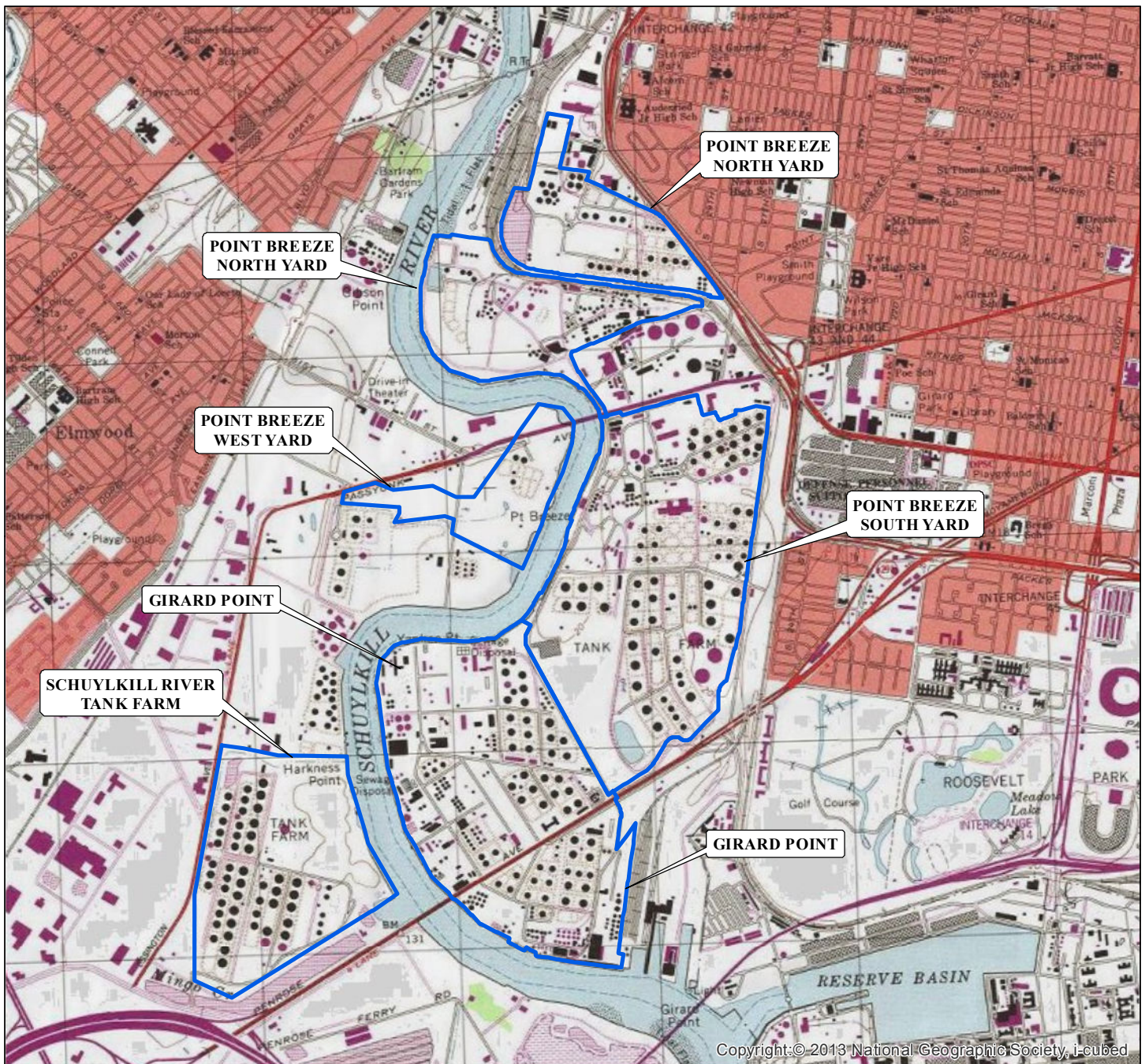
**Preparer of Notice of Intent to Remediate**

Name Jim Oppenheim, PE Title Vice President  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management eFACTS Client ID \_\_\_\_\_

Operations

Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803





QUADRANGLE LOCATION

0 750 1,500 3,000 4,500 Feet



Copyright © 2013 National Geographic Society, i-cubed

REFERENCE: USGS 7.5 MINUTE QUADRANGLE; PHILADELPHIA, PA.-NJ, QUADRANGLE, 1995



### Stantec Consulting Services Inc.

1060 Andrew Drive, Suite 140  
West Chester, Pennsylvania 19380  
Tel. 610-840-2500  
Fax. 610-840-2501  
www.stantec.com

DRAWN BY: GWC  
CHECKED BY: JKD  
APPROVED BY: JLM  
DATE: 11/11/2014

Prepared For:



EVERGREEN RESOURCES  
MANAGEMENT OPERATIONS  
PHILADELPHIA REFINERY COMPLEX  
3144 PASSYUNK AVENUE  
PHILADELPHIA, PA. 19145

Figure Title:

Philadelphia Refinery Complex  
Site Location Map

Figure No.:

1



**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

November 17, 2014

Leigh Anne Rainford, MPH  
Sanitarian Supervisor  
Philadelphia Department of Public Health  
Environmental Engineering Section  
321 University Avenue  
Philadelphia, PA 19104

**RE: Philadelphia Energy Solutions Refining & Marketing LLC (PES) Philadelphia Refinery Complex  
3144 West Passyunk Avenue Philadelphia, Philadelphia County**

Dear Ms. Rainford:

The Land Recycling and Environmental Remediation Standards Act (Act 2) requires that a Notice of Intent to Remediate (NIR) a site be provided to the municipality in which the site is located. This notification is to inform the City of Philadelphia of the submission of an update to the original October 12, 2006 NIR. The purpose of the revised NIR is to update the facility owner and remediator information. On September 8, 2012, Sunoco Inc., (R&M) (Sunoco) conveyed the Philadelphia Refinery to Philadelphia Energy Solutions Refining & Marketing LLC (PES). As part of the transaction, Sunoco retained responsibility for remediation activities for environmental conditions existing at the time of the transfer. Effective December 30, 2013, "Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC" (Evergreen) assumed Sunoco legacy remediation liabilities with respect to the Philadelphia Refinery Complex. A copy of the revised NIR is enclosed for your reference.

Please call me at (302) 477-0192 if you have any questions concerning the proposed remediation.

Best Regards,

James Oppenheim, PE  
Vice President

cc: Evergreen File  
C. David Brown, PADEP  
Charles Barksdale, Philadelphia Energy Solutions Refining and Marketing, LLC  
Jennifer Menges, Stantec Consulting Services Inc.



February 4, 2015

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Leigh Anne Rainford, MPH  
Sanitation Supervisor  
Philadelphia Department of Public Health  
Environmental Engineering Section  
321 University Avenue  
Philadelphia, Pennsylvania 19104

**Re: Human Health Risk Assessment Report  
Philadelphia Energy Solutions (PES) Facility  
3144 West Passyunk Avenue  
Philadelphia, Philadelphia County, Pennsylvania  
Langan Project No.: 2574602**

Dear Sir/Madam:

Notice is hereby given that Evergreen Resources Group, LLC (Evergreen) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection for the Philadelphia Energy Solutions (PES) Refining and Marketing LLC Facility, 3144 West Passyunk Avenue, Philadelphia County, Philadelphia, PA. The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code

This notice is made under the provision of the Land Recycling and Environmental Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.

Please call me at (215) 491-6500 if you have any questions concerning the proposed site-specific risk-based standard for lead.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Charles Barksdale, PES  
Kevin McKeever, Langan

\\langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal  
Forms\2015\_0204\_PES\_HHRA\_Philadelphia Department of Public Health.docx

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		A. Signature X <i>E. Kelly</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee B. Received by (Printed Name) C. Date of Delivery D. Is delivery address different from item 1? <input type="checkbox"/> Yes If YES, enter delivery address below: <input type="checkbox"/> No	
1. Article Addressed to:  Leigh Anne Rainford, MPH Sanitation Supervisor Philadelphia Department of Public Health Environmental Engineering Section 321 University Avenue Philadelphia, Pennsylvania 19104		3. Service Type <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D. 4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes	
2. Article Number (Transfer from service label)		7012 2210 0000 1980 3923	
PS Form 3811, February 2004		Domestic Return Receipt 102595-02-M-1540	

7012 2210 0000 1980 3923

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Restricted Delivery Fee (Endorsement Required)		
<b>Total Postage &amp; Fees</b>	<b>\$</b>	<b>6.48</b>



Sent To Leigh Anne Rainford, MPH  
Sanitation Supervisor  
Philadelphia Department of Public Health  
Environmental Engineering Section  
321 University Avenue  
Philadelphia, Pennsylvania 19104

PS Form 3800, August 2006
See Reverse for Instructions

February 4, 2015

**VIA EMAIL- MLOGAN@PHILLYNEWS.COM**

Legal Advertising Department – Daily News  
P.O. Box 8263 – 4th Floor  
Philadelphia, PA 19101  
Attn: Mary Anne Logan

**Re: Human Health Risk Assessment Report  
Philadelphia Energy Solutions (PES) Facility  
3144 West Passyunk Avenue  
Philadelphia, Philadelphia County, Pennsylvania  
Langan Project No.: 2574602**

On behalf of Evergreen Resources Group, LLC (Evergreen), Langan Engineering and Environmental Services, Inc. requests that the following Public Notice be published in the Philadelphia Daily News under the legal notices section.

***Notification of Submittal of a Human Health Risk Assessment Report***

*Notice is hereby given that Evergreen Resources Group, LLC (remediator) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection (PADEP), Southeast Regional Office for the Philadelphia Energy Solutions Refining and Marketing LLC (PES) Facility, 3144 West Passyunk Avenue, Philadelphia County, Philadelphia, Pennsylvania.*

*The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. The report presents the site-specific risk-based standard for lead that has been developed for the subject property. This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.*

Please publish the notice as soon as possible and fax the proof of publication to me at (215) 491-6501. Please also mail the hard copy of the proof of publication and your invoice to my attention at the following address:

Langan Engineering & Environmental Services  
Attn: Eric Dieck  
2700 Kelly Road, Suite 200  
Warrington, PA 18976

Should you have any questions or comments regarding the request, please contact me at (215) 491.6500.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Charles Barksdale, PES  
Kevin McKeever, Langan

\\langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal  
Forms\2015\_0204\_PES\_HHRA\_Newspaper Notification.docx

**Proof of Publication in The Philadelphia Daily News  
Under Act. No 587, Approved May 16, 1929**

**STATE OF PENNSYLVANIA  
COUNTY OF PHILADELPHIA**

Florence Devlin being duly sworn, deposes and says that **The Philadelphia Daily News** is a newspaper published daily, except Sunday, at Philadelphia, Pennsylvania, and was established in said city in 1925, since which date said newspaper has been regularly issued in said County, and that a copy of the printed notice of publication is attached hereto exactly as the same was printed and published in the regular editions and issues of the said newspaper on the following dates:

February 9, 2015

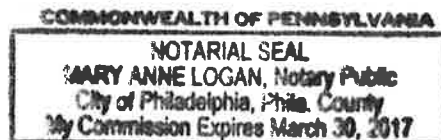
Affiant further deposes and says that she is an employee of the publisher of said newspaper and has been authorized to verify the foregoing statement and that she is not interested in the subject matter of the aforesaid notice of publication, and that all allegations in the foregoing statement as to time, place and character of publication are true.



Sworn to and subscribed before me this 9th day of  
February, 2015.

  
Notary Public

My Commission Expires:



**Copy of Notice of Publication**

**Notification of  
Submittal of a Human  
Health Risk  
Assessment Report**  
Notice is hereby given  
that Evergreen Re-  
sources Group, LLC  
(remediator) is in the  
process of submitting  
a Human Health Risk  
Assessment Report to  
the Pennsylvania De-  
partment of Environ-  
mental Protection  
(PADEP), Southeast  
Regional Office for the  
Philadelphia Energy  
Solutions Refining  
and Marketing LLC  
(PES) Facility, 3144  
West Passyunk Ave-  
nue, Philadelphia  
County, Philadelphia,  
Pennsylvania.  
The report is being  
submitted in accord-  
ance with the require-  
ments and technical  
guidance of the Penn-  
sylvania Land Recy-  
cling and Environmen-  
tal Remediation  
Standards Act (Act 2)  
and the regulations  
promulgated by the  
Pennsylvania Depart-  
ment of Environmen-  
tal Protection  
(PADEP) as Title 25,  
Chapter 250 of the  
Pennsylvania Code.  
The report presents  
the site-specific risk-  
based standard for  
lead that has been de-  
veloped for the sub-  
ject property. This  
notice is made under  
the provision of the  
Land Recycling and  
Environmental Reme-  
diation Standards Act,  
the Act of May 19,  
1995, P.L. #4, No. 2.

**LEGAL NOTICES**

Notification of  
Submittal of a Human Health Risk  
Assessment Report

Notice is hereby given that Evergreen Resources Group, LLC (remediator) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection (PADEP), Southeast Regional Office for the Philadelphia Energy Solutions Refining and Marketing LLC (PES) Facility, 3144 West Passyunk Avenue, Philadelphia County, Philadelphia, Pennsylvania.

The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. The report presents the site-specific risk-based standard for lead that has been developed for the subject property. This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.

Appeared in: ***Philadelphia Inquirer & Philadelphia Daily News*** on Monday, 02/09/2015

[Back](#)



## **BELMONT TERMINAL**



**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

October 6, 2014

Mr. C. David Brown, Ph. D., PG  
Department of Environmental Protection  
2 East Main Street  
Norristown, PA 19401

**RE: Belmont Terminal**  
**2700 West Passyunk Avenue**  
**Philadelphia, Philadelphia County**

Dear Mr. Brown:

In accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2), enclosed is the Notice of Intent to Remediate (NIR) for the Belmont Terminal. This NIR covers the remediation required by the 2003 Consent Order and Agreement (CO&A) and is being submitted with the intent to enter the Belmont Terminal into the Act 2 program with the Pennsylvania Department of Environmental Protection (PADEP).

Please call me at (302) 477-0192 with any questions or comments.

Best Regards,

James Oppenheim, PE  
Senior Environmental Consultant

cc: Evergreen File  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Jennifer Menges, Stantec Consulting Services Inc.



## NOTICE OF INTENT TO REMEDIATE

Act 1995-2 requires four general information items to be included in the NIR: the general location, listing of contaminants, intended use of property, and proposed remediation measures. In addition, indicate the standard(s) to be obtained (if known) and attach a scaled site map (if available).

Property Name Belmont Terminal

Former Name(s) / AKA \_\_\_\_\_

Address / Location 2700 West Passyunk Avenue

City Philadelphia Zip Code 19145

Municipality(s) City of Philadelphia County(ies) Philadelphia

Latitude 39 ° (deg). 55 ' (min) 19.013 " (sec) Longitude 75 ° (deg). 11 ' (min) 27.942 " (sec)

Horizontal Collection Method Geographic Information Systems

Horizontal Reference Datum NAD 1983 Reference Point Facility Entrance

☐ Wish to participate in the DEP/EPA MOA. Contact Troy Conrad at [tconrad@state.pa.us](mailto:tconrad@state.pa.us) for details.

EPA ID#, if known \_\_\_\_\_

DEP ID#(s), if known Multiple

(i.e., eFACTS site ID#, storage tank facility ID#, water quality permit #, watershed permit, air quality permit #, etc.)

Date Release Occurred (if known) \_\_\_\_\_

Provide a brief description of the site contamination in plain language (e.g. fuel oil spill, historical chemical industrial area contamination), the names of any know primary contaminants to be addressed, and the intended future use of the property.

The site contamination consists of historic impacts in soil and groundwater associated with the operation of a distribution terminal for refined petroleum products. The constituents of concern in soil and groundwater are lead, 1,2-dichloroethane, 1,2,4- trimethylbenzene, 1,3,5-trimethylbenzene, benzene, cumene, ethylbenzene, methyl tertiary butyl ether, toluene, total xylenes, ethylene dibromide, anthracene, benzo(a)anthracene, benzo(g,h,i)perylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, phenanthrene, and pyrene. The future use of the facility is to remain industrial.

Provide a general description of proposed remediation measures.

Evergreen is submitting this Notice of Intent to Remediate (NIR) in order to formally enter the Belmont Terminal in the PA Act 2 Program. The facility will be characterized according to PA Act 2, and remedial measures will be developed to address the risk of exposures identified in the characterization activities.

Remediation Standard(s) planned (if known at this time):

<input type="checkbox"/> Unknown at this time	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Background Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health - Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health – Non-Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input checked="" type="checkbox"/> Site Specific Contaminants:	<input checked="" type="checkbox"/> Soil	<input checked="" type="checkbox"/> Groundwater
<input type="checkbox"/> Special Industrial Area* Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater

\*NOTE: Specific standard or Special Industrial Area require a 30-day municipal comment period

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.**Remediator**

Contact Person/Title Jim Oppenheim, Vice President/PE eFACTS Client ID\* 314958  
 Relationship to Site Remediator Client Type\* Limited Liability Company  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management EIN or Federal ID # 46-4184955  
Operations  
 Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803

**Property Owner**

Contact Person/Title Brad Fish, Project Manager eFACTS Client ID\* 161585  
 Relationship to Site Owner Representative Client Type\* Limited Liability Partnership  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (610) 859-5412 Email Address blfish@sunocologistics.com  
 Company Name Sunoco Partners Marketing & Terminals, L.P. EIN or Federal ID # 23-3102655  
 Address (street, city, state, zip) 4041 Market Street, Aston, PA 19014

**Consultant**

Contact Person/Title Jennifer Menges/Principal Consultant, LRS eFACTS Client ID\* N/A  
 Relationship to Site Consultant Client Type\* N/A  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (610) 840-2540 Email Address Jennifer.Menges@stantec.com  
 Company Name Stantec EIN or Federal ID # N/A  
 Address (street, city, state, zip) 1060 Andrew Drive, Suite 140, West Chester, PA 19380

\*Include eFACTS Client ID (if known) – “Client Types” below:

Association/Organization	Limited Liability company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

**Preparer of Notice of Intent to Remediate**

Name Jim Oppenheim Title Vice President  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management eFACTS Client ID 314958

Operations

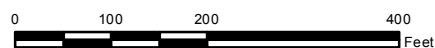
Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803



## Legend

— SITE BOUNDARY

IMAGE SOURCE: ESRI ONLINE - WORLD IMAGERY 2011



### Stantec Consulting Services Inc.

1060 Andrew Drive, Suite 140  
West Chester, Pennsylvania 19380  
Tel. 610-840-2500  
Fax. 610-840-2501  
www.stantec.com

Prepared For:



EVERGREEN RESOURCES  
MANAGEMENT OPERATIONS  
BELMONT TERMINAL  
2700 WEST PASSYUNK AVENUE  
PHILADELPHIA, PA 19145

Figure Title:

Belmont Terminal  
Site Location Map

Figure No.:

1

DRAWN BY: GWC  
CHECKED BY: JKD  
APPROVED BY: JLM  
DATE: 10/6/2014





**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

October 6, 2014

Philadelphia Department of Public Health  
Environmental Health Services  
321 University Avenue  
Philadelphia, PA 19104

**RE: Belmont Terminal**  
**2700 West Passyunk Avenue**  
**Philadelphia, Philadelphia County**

Dear Sir/Madam:

The Land Recycling and Environmental Remediation Standards Act (Act 2) requires that a Notice of Intent to Remediate (NIR) a site be provided to the municipality in which the site is located. In accordance with this provision of Act 2, Evergreen Resources Management Operations (Evergreen) is formally notifying you of its intent to remediate the subject site. A copy of the Notice of Intent to Remediate, which has been sent to the Department of Environmental Protection (DEP), is enclosed. This notice will also be published in the Pennsylvania Bulletin, and a summary of the notice will be placed in the Philadelphia Daily News on October 8, 2014.

Publication of this notice in the Philadelphia Daily News initiates the 30-day public and municipal comment period. During this time, your municipality may request to become involved in the development of the remediation and reuse plans for the site. If the municipality wishes to become involved in this project, please send your comments to Evergreen to my attention. Please call me at (302) 477-0192 if you have any questions concerning the proposed remediation.

Best Regards,

James Oppenheim, PE  
Senior Environmental Consultant

cc: Evergreen File  
C. David Brown, PADEP  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Jennifer Menges, Stantec Consulting Services Inc.



October 8, 2014

Dear Customer:

The following is the proof-of-delivery for tracking number **771396590763**.

---

**Delivery Information:**

<b>Status:</b>	Delivered	<b>Delivered to:</b>	Receptionist/Front Desk
<b>Signed for by:</b>	W.FAUST	<b>Delivery location:</b>	321 S UNIVERSITY AVE PHILADELPHIA, PA 19104
<b>Service type:</b>	FedEx 2Day	<b>Delivery date:</b>	Oct 8, 2014 10:57
<b>Special Handling:</b>	Deliver Weekday		

---

**Shipping Information:**

<b>Tracking number:</b>	771396590763	<b>Ship date:</b>	Oct 6, 2014
		<b>Weight:</b>	0.5 lbs/0.2 kg

**Recipient:**

Environmental Health Services  
Philadelphia Dept of Public Health  
321 University Avenue  
PHILADELPHIA, PA 19104 US

**Reference****Shipper:**

Karen Middleton  
Stantec Consulting Corporation  
1060 ANDREW DR STE 140  
WEST CHESTER, PA 19380 US

non-billable

Thank you for choosing FedEx.



**Proof of Publication in The Philadelphia Daily News  
Under Act. No 587, Approved May 16, 1929**

**STATE OF PENNSYLVANIA  
COUNTY OF PHILADELPHIA**

Florence Devlin being duly sworn, deposes and says that **The Philadelphia Daily News** is a newspaper published daily, except Sunday, at Philadelphia, Pennsylvania, and was established in said city in 1925, since which date said newspaper has been regularly issued in said County, and that a copy of the printed notice of publication is attached hereto exactly as the same was printed and published in the regular editions and issues of the said newspaper on the following dates:

October 8, 2014

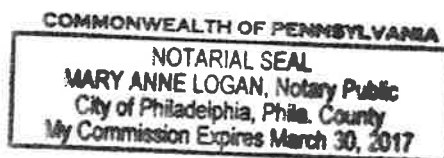
Affiant further deposes and says that she is an employee of the publisher of said newspaper and has been authorized to verify the foregoing statement and that she is not interested in the subject matter of the aforesaid notice of publication, and that all allegations in the foregoing statement as to time, place and character of publication are true.



Sworn to and subscribed before me this 8th day of  
October, 2014.

  
Notary Public

My Commission Expires:



**Copy of Notice of Publication**

**Newspaper Notice of an Intent  
to Remediate to an Environmental Standard.  
(Sections 302(e)(1)(II), 303(h)(1)(II),  
304(n)(1)(I), and 305(e)(1))**

Pursuant to the Land Recycling and Environmental Remediation Standards Act, the act of May 19, 1995, P.L. 4, No. 1995-2., notice is hereby given that Evergreen Resources Management Operations (Evergreen) has submitted to the Pennsylvania Department of Environmental Protection a Notice of Intent to Remediate a site located at 2700 West Passyunk Avenue, Philadelphia, Pennsylvania. This Notice of Intent to Remediate states that the site is a distribution terminal for petroleum products and has been found to be contaminated with petroleum compounds which have contaminated groundwater and soil on the site. Evergreen has indicated that the proposed remediation measures will be source reduction and engineered boundary controls. The proposed future use of the property will be non-residential for industrial use.

Evergreen plans to use the site-specific standard at the site. The Act provides for a 30-day public comment period for site-specific standard remediations. The 30-day comment period is initiated with the publication of this notice. Until 11/7/2014, the City of Philadelphia may submit a request to Evergreen to be involved in the development of the remediation and reuse plans for the site. The City of Philadelphia may also submit a request to Evergreen during this 30-day comment period to develop and implement a public involvement plan. Copies of these requests and of any comments should also be submitted to the Department of Environmental Protection at PADEP, 2 East Main Street, Norristown, PA 19401 to the attention of Mr. C. David Brown. All correspondence with Evergreen should be addressed to James Oppenheim, Evergreen Resources Management Operations at 2 Righter Parkway, Suite 200, Wilmington, DE 19803.

February 4, 2015

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Leigh Anne Rainford, MPH  
Sanitation Supervisor  
Philadelphia Department of Public Health  
Environmental Engineering Section  
321 University Avenue  
Philadelphia, Pennsylvania 19104

**Re: Human Health Risk Assessment Report  
Belmont Terminal  
2700 West Passyunk Avenue  
Philadelphia, Philadelphia County, Pennsylvania  
Langan Project No.: 2574602**

Dear Sir/Madam:

Notice is hereby given that Evergreen Resources Group, LLC (Evergreen) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection for Belmont Terminal, 2700 West Passyunk Avenue, Philadelphia County, Philadelphia, Pennsylvania. The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code

This notice is made under the provision of the Land Recycling and Environmental Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.

Please call me at (215) 491-6500 if you have any questions concerning the proposed site-specific risk-based standard for lead.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Kevin McKeever, Langan

\\langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal  
Forms\2015\_0204\_Belmont\_HHRA\_Philadelphia Department of Public Health.docx

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		<p>A. Signature  X <i>Em Holler</i> <input type="checkbox"/> Agent <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to:</p> <p>Leigh Anne Rainford, MPH  Sanitation Supervisor  Philadelphia Department of Public Health  Environmental Engineering Section  321 University Avenue  Philadelphia, Pennsylvania 19104</p>		<p>B. Received by (Printed Name) _____ C. Date of Delivery _____</p>	
<p>2. Article Number  (Transfer from service label) <b>7012 2210 0000 1980 3947</b></p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes  If YES, enter delivery address below: <input type="checkbox"/> No</p>	
		<p>3. Service Type  <input checked="" type="checkbox"/> Certified Mail <input type="checkbox"/> Express Mail  <input type="checkbox"/> Registered <input checked="" type="checkbox"/> Return Receipt for Merchandise  <input type="checkbox"/> Insured Mail <input type="checkbox"/> C.O.D.</p>	
		<p>4. Restricted Delivery? (Extra Fee) <input type="checkbox"/> Yes</p>	
<p>PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540</p>			

U.S. Postal Service<sup>TM</sup>  
**CERTIFIED MAIL<sup>TM</sup> RECEIPT**  
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

**OFFICIAL USE**

Postage	\$ 1.48
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	6.48
<b>Total Postage &amp; Fees</b>	<b>13.96</b>

Postmark Here  
**FEB - 4 2005**

Sent To  
Leigh Anne Rainford, MPH  
Sanitation Supervisor  
Philadelphia Department of Public Health  
Environmental Engineering Section  
321 University Avenue  
Philadelphia, Pennsylvania 19104

PS Form 3800, August 2006 See Reverse for Instructions

February 4, 2015

**VIA EMAIL- MLOGAN@PHILLYNEWS.COM**

Legal Advertising Department – Daily News  
P.O. Box 8263 – 4th Floor  
Philadelphia, PA 19101  
Attn: Mary Anne Logan

**Re: Human Health Risk Assessment Report  
Belmont Terminal  
2700 West Passyunk Avenue  
Philadelphia, Philadelphia County, Pennsylvania  
Langan Project No.: 2574602**

On behalf of Evergreen Resources Group, LLC (Evergreen), Langan Engineering and Environmental Services, Inc. requests that the following Public Notice be published in the Philadelphia Daily News under the legal notices section.

***Notification of Submittal of a Human Health Risk Assessment Report***

*Notice is hereby given that Evergreen Resources Group, LLC (remediator) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection (PADEP), Southeast Regional Office for Belmont Terminal, 2700 West Passyunk Avenue, Philadelphia County, Philadelphia, Pennsylvania.*

*The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. The report presents the site-specific risk-based standard for lead that has been developed for the subject property. This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.*

Please publish the notice as soon as possible and fax the proof of publication to me at (215) 491-6501. Please also mail the hard copy of the proof of publication and your invoice to my attention at the following address:

Langan Engineering & Environmental Services  
Attn: Eric Dieck  
2700 Kelly Road, Suite 200  
Warrington, PA 18976

Should you have any questions or comments regarding the request, please contact me at (215) 491.6500.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Kevin McKeever, Langan

\\langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal  
Forms\2015\_0204\_Belmont\_HHRA\_Newspaper Notification.docx

**Proof of Publication in The Philadelphia Daily News  
Under Act. No 587, Approved May 16, 1929**

**STATE OF PENNSYLVANIA  
COUNTY OF PHILADELPHIA**

Florence Devlin being duly sworn, deposes and says that **The Philadelphia Daily News** is a newspaper published daily, except Sunday, at Philadelphia, Pennsylvania, and was established in said city in 1925, since which date said newspaper has been regularly issued in said County, and that a copy of the printed notice of publication is attached hereto exactly as the same was printed and published in the regular editions and issues of the said newspaper on the following dates:

February 9, 2015

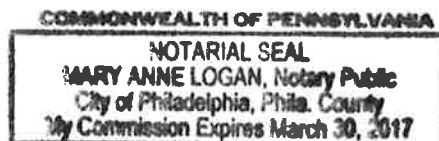
Affiant further deposes and says that she is an employee of the publisher of said newspaper and has been authorized to verify the foregoing statement and that she is not interested in the subject matter of the aforesaid notice of publication, and that all allegations in the foregoing statement as to time, place and character of publication are true.



Sworn to and subscribed before me this 9th day of  
February, 2015.

  
Notary Public

My Commission Expires:



**Copy of Notice of Publication**

**Notification of  
Submittal of a  
Human Health Risk  
Assessment Report**  
Notice is hereby given  
that Evergreen Re-  
sources Group, LLC  
(remediator) is in the  
process of submitting  
a Human Health Risk  
Assessment Report to  
the Pennsylvania De-  
partment of Environ-  
mental Protection  
(PADEP), Southeast  
Regional Office for  
Belmont Terminal,  
2700 West Passyunk  
Avenue, Philadelphia  
County, Philadelphia,  
Pennsylvania.  
The report is being  
submitted in accord-  
ance with the require-  
ments and technical  
guidance of the Penn-  
sylvania Land Recy-  
cling and Environmen-  
tal Remediation  
Standards Act (Act 2)  
and the regulations  
promulgated by the  
Pennsylvania Depart-  
ment of Environmen-  
tal Protection  
(PADEP) as Title 25,  
Chapter 250 of the  
Pennsylvania Code.  
The report presents  
the site-specific risk-  
based standard for  
lead that has been de-  
veloped for the sub-  
ject property. This  
notice is made under  
the provision of the  
Land Recycling and  
Environmental Reme-  
diation Standards Act,  
the Act of May 19,  
1995, P.L. #4, No. 2.

**LEGAL NOTICES**Notification of  
Submittal of a

## Human Health Risk Assessment Report

Notice is hereby given that Evergreen Resources Group, LLC (remediator) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection (PADEP), Southeast Regional Office for Belmont Terminal, 2700 West Passyunk Avenue, Philadelphia County, Philadelphia, Pennsylvania.

The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. The report presents the site-specific risk-based standard for lead that has been developed for the subject property. This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.

Appeared in: ***Philadelphia Inquirer & Philadelphia Daily News*** on Monday, 02/09/2015

[Back](#)

## **MARCUS HOOK INDUSTRIAL COMPLEX**





**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

January 15, 2015

Mr. C. David Brown, Ph. D., PG  
Department of Environmental Protection  
2 East Main Street  
Norristown, PA 19401

**RE:     Marcus Hook Industrial Complex**  
          **100 Green Street**  
          **Marcus Hook, Delaware County**

Dear Mr. Brown:

In accordance with the Land Recycling and Environmental Remediation Standards Act (Act 2), enclosed is the revised Notice of Intent to Remediate (NIR) for the Marcus Hook Industrial Complex (site). The original NIR for the site was submitted on September 15, 2011. The purpose of this revision is to update owner and remediator information for the facility and to add Area of Interest (AOI) 8. Sunoco, Inc. (R&M) ("Sunoco") previously operated the refinery located at 100 Green Street in Marcus Hook, Pennsylvania (the "Marcus Hook Property"). The Marcus Hook Property is currently owned and operated by Sunoco Partners Marketing & Terminals, L.P. ("SPMT") and Sunoco Pipeline L.P. and is referred to as the Marcus Hook Industrial Complex. As of December 30, 2013, Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC (Evergreen), assumed the responsibility for remediation liabilities occurring at the site on or before December 30, 2013. Evergreen will continue to manage the remediation work at the facility under the One Cleanup Program with the Pennsylvania Department of Environmental Protection (PADEP) and United States Environmental Protection Agency (USEPA).

Please call me at (302) 477-0192 with any questions or comments.

Best Regards,

James Oppenheim, PE  
Vice President

cc:     Evergreen File  
          Brad Fish, Sunoco Partners Marketing & Terminals, L.P.  
          Jennifer Menges, Stantec Consulting Services Inc.



## NOTICE OF INTENT TO REMEDIATE

Act 1995-2 requires four general information items to be included in the NIR: the general location, listing of contaminants, intended use of property, and proposed remediation measures. In addition, indicate the standard(s) to be obtained (if known) and attach a scaled site map (if available).

Property Name Marcus Hook Industrial Complex

Former Name(s) / AKA Sunoco Inc. (R&M) Marcus Hook Refinery

Address / Location 100 Green Street

City Marcus Hook Zip Code 19061

Municipality(s) Borough of Marcus Hook County(ies) Delaware

Latitude 39 ° (deg). 48 ' (min) 43.3141 " (sec) Longitude -75 ° (deg). 24 ' (min) 49.0411 " (sec)

Horizontal Collection Method Geographic Information Systems

Horizontal Reference Datum NAD 1983 Reference Point Visitor Entrance

☒ Wish to participate in the DEP/EPA MOA. Contact Troy Conrad at [tconrad@state.pa.us](mailto:tconrad@state.pa.us) for details.

EPA ID#, if known 110032885723

DEP ID#(s), if known Multiple

(i.e., eFACTS site ID#, storage tank facility ID#, water quality permit #, watershed permit, air quality permit #, etc.)

Date Release Occurred (if known) \_\_\_\_\_

Provide a brief description of the site contamination in plain language (e.g. fuel oil spill, historical chemical industrial area contamination), the names of any know primary contaminants to be addressed, and the intended future use of the property.

The site contamination consists of impacts to soil and groundwater associated with historic petrochemical refining operations. The primary constituents of concern in soil and groundwater are lead, 1,2-dichloroethane, 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, benzene, cumene, ethylbenzene, methyl tertiary butyl ether, toluene, total xylenes, ethylene dibromide, anthracene, benzo(a)anthracene, benzo(g,h,i)perylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, phenanthrene, and pyrene. The future use of the facility is to remain industrial.

Provide a general description of proposed remediation measures.

Evergreen is submitting this Notice of Intent to Remediate (NIR) in order update an NIR previously submitted on September 15, 2011 which originally entered the property into the PA Act 2 Program. In November 2011, the facility was formally entered into the PA One Cleanup Program with the USEPA and PADEP. The purpose of this NIR revision is to update the facility ownership and remediation information. The facility has been divided into 7 Areas of Interest (AOIs) within in the state of Pennsylvania as shown in the attached Figure 1. These areas consist of the 10 Plant area (AOI 1), the 12 Plant area (AOI 2), the refinery office buildings (AOI 3), Upper No. 1 Tank Farm, (AOI 4), Lower No. 1 Tank Farm (AOI 5), the Former Lube Oil Center (AOI 6), and the polypropylene plant (AOI 8). The area of the property located in the State of Delaware has been divided into a separate AOI (AOI 7) and will be

characterized and remediated separately. Each AOI will be characterized in accordance with PA Act 2, and remedial measures will be developed to address the risk of exposure identified during the characterization activities.

Remediation Standard(s) planned (if known at this time):

<input type="checkbox"/> Unknown at this time	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Background Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health - Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input type="checkbox"/> Statewide Health – Non-Residential Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater
<input checked="" type="checkbox"/> Site Specific Contaminants:	<input checked="" type="checkbox"/> Soil	<input checked="" type="checkbox"/> Groundwater
<input type="checkbox"/> Special Industrial Area* Contaminants:	<input type="checkbox"/> Soil	<input type="checkbox"/> Groundwater

\*NOTE: Specific standard or Special Industrial Area require a 30-day municipal comment period

Remediator / Property Owner / Consultant. Complete the form below for each recipient obtaining a release of liability upon approval of the final report. Attach additional sheets as necessary.**Remediator**

Contact Person/Title Jim Oppenheim, Vice President/PE eFACTS Client ID\* 314959  
 Relationship to Site Remediation Project Manager Client Type\* Limited Liability Company  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management Operations EIN or Federal ID # 46-4184955  
 Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803

**Property Owner**

Contact Person/Title Brad Fish, Project Manager eFACTS Client ID\* 161585  
 Relationship to Site Owner Representative Client Type\* Limited Liability Partnership  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (610) 859-5412 Email Address blfish@sunocologistics.com  
 Company Name Sunoco Partners Marketing & Terminals, L.P. EIN or Federal ID # 23-3102655  
 Address (street, city, state, zip) 4041 Market Street, Aston, PA 19014

**Consultant**

Contact Person/Title Jennifer Menges/Principal Consultant, LRS eFACTS Client ID\* N/A  
 Relationship to Site Consultant Client Type\* N/A  
 (e.g. owner, remediator, participant in cleanup, consultant, etc.)  
 Phone Number (610) 840-2540 Email Address Jennifer.Menges@stantec.com  
 Company Name Stantec EIN or Federal ID # N/A  
 Address (street, city, state, zip) 1060 Andrew Drive, Suite 140, West Chester, PA 19380

\*Include eFACTS Client ID (if known) – “Client Types” below:

Association/Organization	Limited Liability company	Partnership-General
Authority	Limited Liability Partnership	Partnership-Limited
County	Municipality	School District
Estate/Trust	Non-Pennsylvania Government	Sole Proprietorship
Federal Agency	Other (Non-Government)	State Agency
Individual	Pennsylvania Corporation	

**Preparer of Notice of Intent to Remediate**

Name Jim Oppenheim Title Vice President  
 Phone Number (302) 477-0192 Email Address JROPPENHEIM@evergreenresgmt.com  
 Company Name Evergreen Resources Management eFACTS Client ID 314959

Operations

Address (street, city, state, zip) 2 Righter Parkway, Suite 200, Wilmington, DE 19803

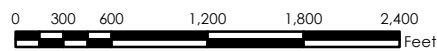




#### LEGEND

- SITE BOUNDARY (PENNSYLVANIA)
- SITE BOUNDARY (DELAWARE)

IMAGE SOURCE: TerraServer 2014



#### Stantec Consulting Services Inc.

1060 Andrew Drive, Suite 140  
West Chester, Pennsylvania 19380  
Tel. 610-840-2500  
Fax. 610-840-2501  
[www.stantec.com](http://www.stantec.com)

DRAWN BY: GWC  
CHECKED BY: JKD  
APPROVED BY: JLM  
DATE: 1/15/2015

Prepared For:



MARCUS HOOK REFINERY OPERATIONS,  
A SERIES OF EVERGREEN RESOURCES  
GROUP, LLC.  
100 GREEN STREET  
MARCUS HOOK, PA 19061

Figure Title:

MARCUS HOOK INDUSTRIAL COMPLEX  
SITE LOCATION MAP

Figure No.:

1





**Evergreen Resources Management**  
2 Righter Parkway, Suite 200  
Wilmington, DE 19803

January 15, 2015

Aubrey Mulholland  
Borough Manager  
Borough of Marcus Hook  
10<sup>th</sup> and Green Streets  
Marcus Hook, PA, 19601

**RE:     Marcus Hook Industrial Complex  
          100 Green Street  
          Marcus Hook, Delaware County**

Dear Ms. Mulholland:

The Land Recycling and Environmental Remediation Standards Act (Act 2) requires that a Notice of Intent to Remediate (NIR) a site be provided to the municipality in which the site is located. This notification is to inform the Borough of Marcus Hook of the submission of an update to the original November 15, 2011 NIR. The purpose of the revision is to update owner and remediator information for the facility and to add Area of Interest (AOI) 8. Sunoco, Inc. (R&M) ("Sunoco") previously operated the refinery located at 100 Green Street in Marcus Hook, Pennsylvania (the "Marcus Hook Property"). The Marcus Hook Property is currently owned and operated by Sunoco Partners Marketing & Terminals, L.P. ("SPMT") and Sunoco Pipeline L.P. and is referred to as the Marcus Hook Industrial Complex. As of December 30, 2013, Marcus Hook Refinery Operations, a series of Evergreen Resources Group, LLC (Evergreen), assumed the responsibility for remediation liabilities occurring at the site on or before December 30, 2013. A copy of the revised NIR is enclosed for your reference.

Please call me at (302) 477-0192 with any questions or comments.

Best Regards,

James Oppenheim, PE  
Vice President

cc:     Evergreen File  
          C. David Brown, PADEP  
          Brad Fish, Sunoco Partners Marketing & Terminals, LP  
          Jennifer Menges, Stantec Consulting Services Inc.

February 3, 2015

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Aubrey E. Mulholland  
Borough Manager  
Borough of Marcus Hook  
10<sup>th</sup> & Green Streets  
Marcus Hook, Pennsylvania 19061

**Re: Human Health Risk Assessment Report  
Marcus Hook Industrial Complex  
100 Green Street  
Marcus Hook, Delaware County, Pennsylvania  
Langan Project No.: 2574602**


Dear Ms. Mulholland:

Notice is hereby given that Evergreen Resources Group, LLC (Evergreen) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection for Marcus Hook Industrial Complex, 100 Green Street, Marcus Hook, Delaware County, Pennsylvania. The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code

This notice is made under the provision of the Land Recycling and Environmental Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.

Please call me at (215) 491-6500 if you have any questions concerning the proposed site-specific risk-based standard for lead.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**

  
Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Kevin McKeever, Langan

\\Langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal Forms\2015\_0204\_Marcus Hook\_HHRA\_Philadelphia Department of Public Health.docx



## SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

## 1. Article Addressed to:

Aubrey Mulholland  
Borough Manager  
Borough of Marcus Hook  
10<sup>th</sup> & Green Streets  
Marcus Hook, Pennsylvania 19061

## 2. Article Number

(Transfer from service label)

7012 2210 0000 1980 3930

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

## COMPLETE THIS SECTION ON DELIVERY

## A. Signature

X

Janine Cain

☐ Agent☐ Addressee

## B. Received by (Printed Name)

Janine Cain

## C. Date of Delivery

2/5/15

D. Is delivery address different from item 1? ☐ Yes  
If YES, enter delivery address below: ☐ No

## 3. Service Type

☒ Certified Mail☐ Express Mail☐ Registered☒ Return Receipt for Merchandise☐ Insured Mail☐ C.O.D.

## 4. Restricted Delivery? (Extra Fee)

☐ Yes

U.S. Postal Service™

## CERTIFIED MAIL™ RECEIPT

(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at [www.usps.com](http://www.usps.com)

OFFICIAL USE

Postage \$ .48

Certified Fee 3.30

Return Receipt Fee  
(Endorsement Required) 2.70Restricted Delivery Fee  
(Endorsement Required)

Total Postage &amp; Fees \$ 6.48

Sent To

Aubrey Mulholland

Street, Apt. No.,  
or PO Box No.

Borough Manager

Borough of Marcus Hook

City, State, ZIP+4

10<sup>th</sup> & Green Streets

Marcus Hook, Pennsylvania 19061

PS Form 3800, August 2006

See Reverse for Instructions



7012 2210 0000 1980 3930

February 4, 2015

**VIA EMAIL- LEGALS@DELCOTIMES.COM**

Delaware County Daily Times  
Legal Advertising Department  
500 Mildred Avenue  
Primos, PA 19018  
Attn: Mary Lynn

**Re: Human Health Risk Assessment Report  
Marcus Hook Industrial Complex  
100 Green Street  
Marcus Hook, Delaware County, Pennsylvania  
Langan Project No.: 2574602**

On behalf of Evergreen Resources Group, LLC (Evergreen), Langan Engineering and Environmental Services, Inc. requests that the following Public Notice be published in the Delaware County Daily Times under the legal notices section.

***Notification of Submittal of a Human Health Risk Assessment Report***

*Notice is hereby given that Evergreen Resources Group, LLC (remediator) is in the process of submitting a Human Health Risk Assessment Report to the Pennsylvania Department of Environmental Protection (PADEP), Southeast Regional Office for Marcus Hook Industrial Complex, 100 Green Street, Marcus Hook, Delaware County, Pennsylvania.*

*The report is being submitted in accordance with the requirements and technical guidance of the Pennsylvania Land Recycling and Environmental Remediation Standards Act (Act 2) and the regulations promulgated by the Pennsylvania Department of Environmental Protection (PADEP) as Title 25, Chapter 250 of the Pennsylvania Code. The report presents the site-specific risk-based standard for lead that has been developed for the subject property. This notice is made under the provision of the Land Recycling and Environmental Remediation Standards Act, the Act of May 19, 1995, P.L. #4, No. 2.*

Please publish the notice as soon as possible and fax the proof of publication to me at (215) 491-6501. Please also mail the hard copy of the proof of publication and your invoice to my attention at the following address:

Langan Engineering & Environmental Services  
Attn: Eric Dieck  
2700 Kelly Road, Suite 200  
Warrington, PA 18976

Should you have any questions or comments regarding the request, please contact me at (215) 491.6500.

Sincerely,  
**Langan Engineering and Environmental Services, Inc.**



Eric Dieck  
Staff Hydrogeologist

cc: Jim Oppenheim, Evergreen  
Brad Fish, Sunoco Partners Marketing & Terminals, LP  
Kevin McKeever, Langan

\\langan.com\data\DT\data6\2574601\Office Data\Reports\Lead Human Health Risk Assessment\HHRA\Public Notices and Submittal  
Forms\2015\_0204\_Marcus Hook\_HHRA\_Newspaper Notification.docx

**Proof of Publication of Notice in Delaware County Daily Times**

Under Newspaper Advertising Act. No. 587, Approved May 16, 1929

**Notification of Submittal  
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State of Pennsylvania,  
County of Delaware,

}

ss.

**LYNN D. BETTCHER**

designated agent of CENTRAL STATES PUBLISHING, INC.,

being duly sworn, deposes and says that the DELAWARE COUNTY DAILY TIMES, a daily newspaper of general circulation as defined in the above-mentioned Act, published at Primos, Delaware County, Pennsylvania, was established September 7, 1876, and issued and published continuously thereafter for a period of 100 years and for a period of more than six months immediately prior hereto, (under the name Chester Times prior to November 2, 1959) in the City of Chester, County of Delaware and further says that the printed notice or publication attached hereto is an exact copy of a notice or publication printed and published in the regular edition and issues of the DELAWARE COUNTY DAILY TIMES on the following dates, viz.....

February

6,

A.D. 20 15

and that said advertising was inserted in all respects as ordered.

Affiant further deposes that he is the proper person duly authorized by CENTRAL STATES PUBLISHING, INC. publisher of said DELAWARE COUNTY DAILY TIMES, a newspaper of general circulation, to verify the foregoing statement under oath and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.



Sworn to and subscribed before me this

6th

day of

February

20 15



Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Kathleen Ragni, Notary Public  
Upper Darby Twp., Delaware County  
My Commission Expires March 2, 2015

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES



PENNSYLVANIA GROUP

Account: <b>887295</b>	Date: <b>02/05/15</b>
Name:	Start Date: <b>02/06/15</b> Stop Date: <b>02/06/15</b>
Company: <b>LANGAN</b>	Class: <b>1201 - Legal Notices</b>
	Ad ID: <b>502905</b>
Address: <b>P.O. BOX 1569</b>	Ad Taker: <b>CRMWISNEWSKI</b>
<b>DOYLESTOWN, PA 18901</b>	Sales Person: <b>Marylynn Wisnewski-Class Rep (</b>
	Words: <b>149</b>
Telephone: <b>(215) 491-6500</b>	Lines: <b>42</b>
Fax:	Agate Lines: <b>42</b>
Description: <b>Notification of Submittal of a Human</b>	Depth: <b>4.667</b>
	Inserts: <b>2</b>
	Blind Box:
	PO Number:

Ad sample

Total: **\$154.82**

Paid Amount: **\$0.00**

Amount Due: **\$154.82**

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**Publication**

Daily Times and Sunday Times,  
delcotimes.com

*We Appreciate Your Business!  
Thank You !*